

*fresh ship Friday*

**Work Order ID 83014**

**\*83014\***

Page 1

Thursday, April 12, 2012 12:38:38 PM

Item ID: D3531-3 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Bracket Front Plate  
Start Date: 4/12/2012 Start Qty: 6.00 **\*6\*** Cust Item ID:  
Required Date: 4/24/2012 Req'd Qty: 6.00 **\*6\*** Customer:  
Reference:

Approvals: Process Plan: *R* Date: *204/12* Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3531	Rev A								

100

0.00

**\*100\***

Waterjet

FLOW CNC Waterjet

*6061 .040*

FLOW WATER JET

Memo

1-Cut as per Dwg D3531

Dwg Rev: *A*

Prog Rev: *A*

2-Deburr if necessary

0.00

*6 0* *Jm*  
*12-5-9*

110

QC2- Inspect parts off machine FAI/FAIB

0.00

**\*110\***

QC

Quality Control

Memo

0.00

*6 0* *Jm*  
*12-5-9*

120

QC8- Inspect parts - second check

0.00

**\*120\***

QC

Quality Control

Memo

0.00

*6* *12-05-10*

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:			WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 83014****\*83014\***

Page 2

Thursday, April 12, 2012 12:38:38 PM

Item ID: D3531-3

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Bracket Front Plate

Start Date: 4/12/2012 Start Qty: 6.00

**\*6\***

Cust Item ID:

Required Date: 4/24/2012 Req'd Qty: 6.00

**\*6\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Small Fab	0.00							
<b>*130*</b>	Small Fab	0.00							
Small Fab	Memo								
	Deburr if necessary. N/A								
140	NC BRAKE	0.00							
<b>*140*</b>	Brake NC	0.00				5	1		
Brake NC	Memo								
	Bend as per Dwg D3530								
150	QC5- Inspect part completeness to step on W/O	0.00							
<b>*150*</b>	QC	0.00				5			
Quality Control	Memo								



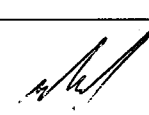

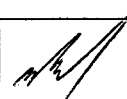
8 u/05/10

M 12.05.10

W/O:		WORK ORDER CHANGES						
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: Small FAB NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: Scrap Disposition: Scrap QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
12/05/10	140	1 part was scrap at the set out of tolerance R.C process	 05/04/12 17/01/10	Scrap - destroy No replace	 12/05/10	 12-05-10	 17/01/10 05/04/12	 12-05-10

NOTE: Date & initial all entries

**Work Order ID 83014**

Thursday, April 12, 2012 12:38:38 PM

**\*83014\***

Page 3

Item ID: D3531-3 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Bracket Front Plate  
Start Date: 4/12/2012 Start Qty: 6.00 **\*6\*** Cust Item ID:  
Required Date: 4/24/2012 Req'd Qty: 6.00 **\*6\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Chemical Conversion Coat per QSI005 4.1	0.00							
<b>*160*</b>									
HandFinish	Memo	0.00							
Hand Finishing									
170	QC3- Inspect Part Finish	0.00							
<b>*170*</b>									
QC	Memo	0.00							
Quality Control									
180	Identify as per dwg & Stock Location: <u>GA</u>	0.00							
<b>*180*</b>									
Packaging	Memo	0.00							
Packaging									

(5) 7/6/12 5.10

5

SB  
12/05/11

(5)

SB  
12/05/11

W/O:		WORK ORDER CHANGES						
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**\* Work Order ID 83014****\*83014\***

Page 4

Thursday, April 12, 2012 12:38:38 PM

Item ID: D3531-3

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Bracket Front Plate

Start Date: 4/12/2012 Start Qty: 6.00

**\*6\***

Cust Item ID:

Required Date: 4/24/2012 Req'd Qty: 6.00

**\*6\***

Customer:

Reference:

Approvals:

Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

190

QC21- Final Inspection - Work Order Release

0.00

**\*190\***

QC

Memo

0.00

Quality Control

12/15/14

ML5 12/05/11

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:			WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

Thursday, April 12, 2012 12:38:41 PM

Page 1

Work Order ID: 83014

\*83014\*

Parent Item: D3531-3

\*D3531-3\*

Parent Item Name: Bracket Front Plate

Start Date: 4/12/2012

Required Date: 4/24/2012

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP Rev:A New Issue 07-09-24 EC verified by DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6S.040		Purchased	No			100	sf	352.5700	0.1313	0.829263			

\*M6061T6S 040\*

\*\*

6061-T6 .040 Sheet

Location

Loc Qty

Loc Code

MAT021

352.57

121030

82.07

121099

270.5

121030

Jm  
12-5-9

W/O:		WORK ORDER CHANGES						
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	83014
<b>Description:</b> Bracket Front Plate		<b>Part Number:</b>	D3531-3
<b>Inspection Dwg:</b> D3531	<b>Rev:</b> A	<b>Page 1 of 1</b>	

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.129	+0.005/-0.001	0.130	✓		vern	HB-02
3.72	+/-0.030	3.726	✓		vern	HB-02
0.37	+/-0.030	0.378	✓		vern	HB-02
2.840	+/-0.010	2.836	✓		vern	HB-02
0.88	+/-0.030	0.876	✓		vern	HB-02
3.50	+/-0.030	3.498	✓		vern	HB-02
4.67	+/-0.030	4.670	✓		vern	HB-02

<b>Measured by:</b> Jm /	<b>Audited by:</b> m/n	<b>Prototype Approval:</b>	N/A
<b>Date:</b> 12-5-9	<b>Date:</b> 12-05-10	<b>Date:</b>	N/A

<b>Rev</b>	<b>Date</b>	<b>Change</b>	<b>Revised by</b>	<b>Approved</b>
A	07.10.15	New Issue	KJ/EC/DD	DS

W/O:			WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

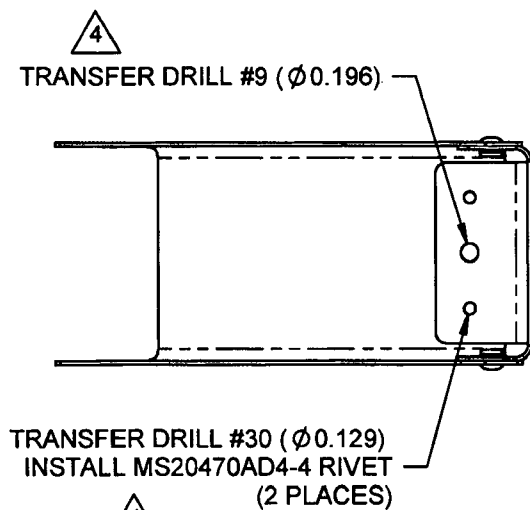
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NCR:			WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector	
			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

**NOTE:** Date & initial all entries



DESIGN CB	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED LE	APPROVED [Signature]	DRAWING NO. D3531	REV. A SHEET 1 OF 3
DATE 07.06.19	TITLE BRACKET ASSEMBLY		SCALE 1:2
REV A	DATE 07.06.19	DESCRIPTION NEW ISSUE	



RELEASED  
07-08-03

D3531-3  
BRACKET FRONT PLATE

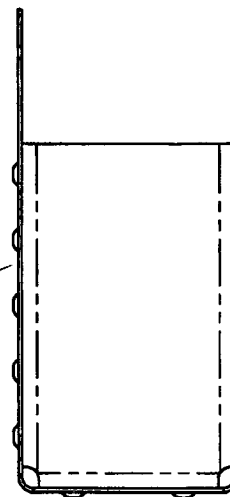
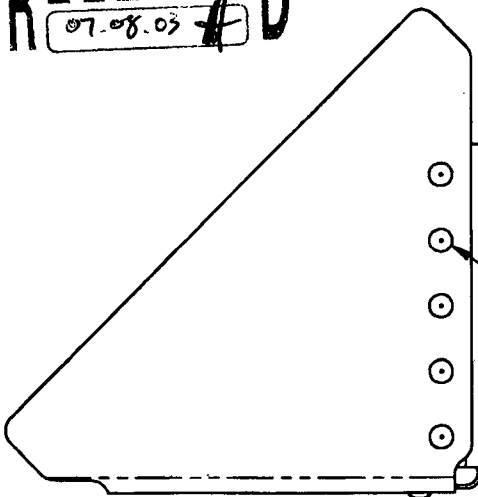
D3531-1  
BRACKET



SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 83014

MS20470AD4-4  
(10 PLACES)

RM-04-12



### D3531-041 BRACKET ASSEMBLY

#### NOTES:

- 1) FINISH: POWDER COAT ASSEMBLY BLACK  
SANDTEX (4.3.5.7) PER DART QSI 005 4.3  
ALL PARTS
- 2) ASSEMBLE PER DART QSI 003
- 3) IDENTIFY WITH DART P/N "D3531-041" USING  
WHITE MARKER ON INSIDE OF BRACKET  
ASSEMBLY, WHERE INDICATED
- 4) TRANSFER DRILL HOLES FROM D3531-1 BRACKET  
THROUGH D3531-3 BRACKET FRONT PLATE  
BEFORE FINISHING

#### PARTS LIST

QTY.	P/N	DESCRIPTION
X	D3531-041	BRACKET ASSEMBLY
1	D3531-1	BRACKET
1	D3531-3	BRACKET FRONT PLATE
12	MS20470AD4-4	RIVET

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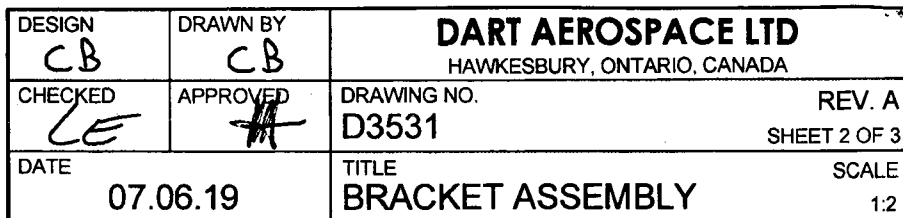
W/O:			WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector		

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

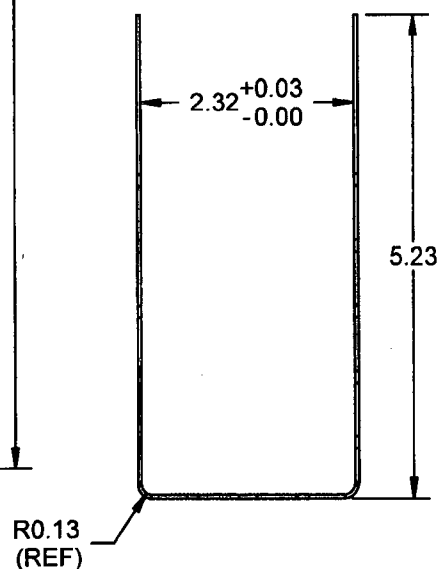
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:			WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector	
			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

**NOTE:** Date & initial all entries



RELEASED  
07-08-03



## **D3531-1 BRACKET**

NOTES:

- 1) MATERIAL: ALUMINUM 6061-T6/T62 SHEET, 0.040 THICK PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 (REF DART SPEC M6061T6S.040)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP CORNERS TO 0.010 MAX
- 6) PART IS SYMMETRIC ABOUT C

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W/O:			WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

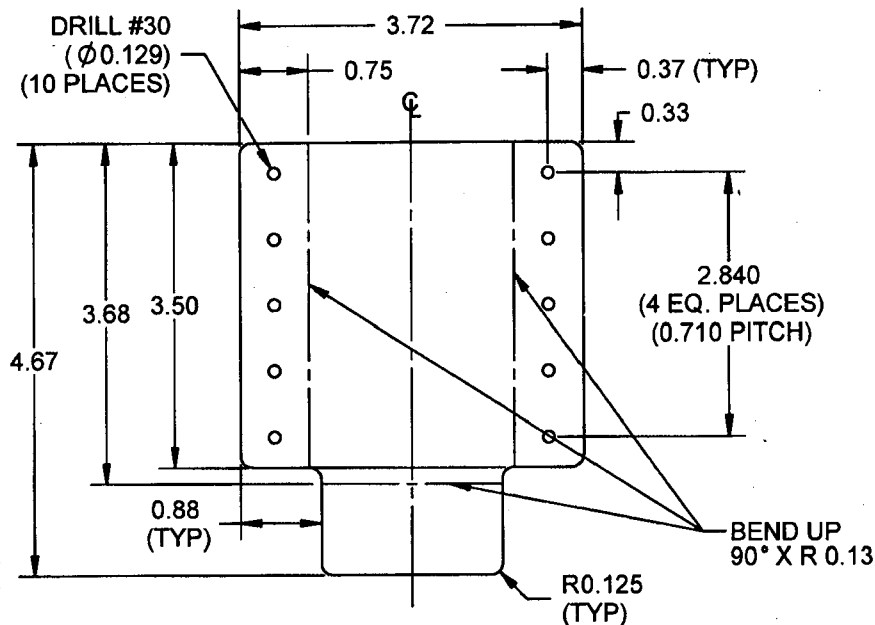
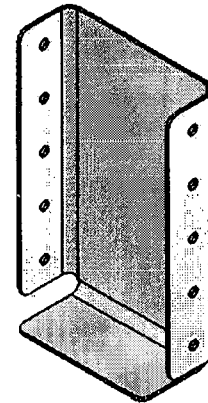
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

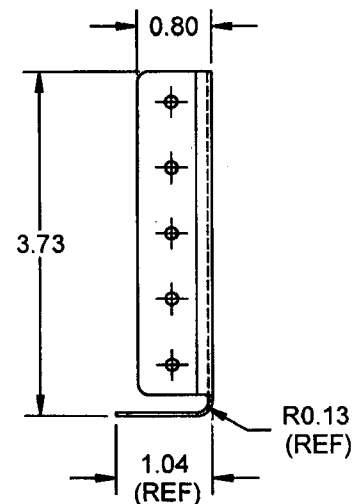
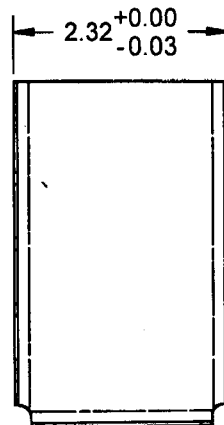


**DART**

DESIGN CB	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED LE	APPROVED #	DRAWING NO. D3531	REV. A
DATE 07.06.19	TITLE BRACKET ASSEMBLY		SHEET 3 OF 3 SCALE 1:2

**D3531-3F FLAT PATTERN****RELEASED**  
07.08.03 #

83014

**D3531-3 BRACKET FRONT PLATE****NOTES:**

- 1) MATERIAL: ALUMINUM 6061-T6/T62 SHEET, 0.040 THICK PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 (REF DART SPEC M6061T6S.040)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP CORNERS TO 0.010 MAX
- 6) PART IS SYMMETRIC ABOUT  $\phi$

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W/O:			WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:			WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector	
			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

**NOTE:** Date & initial all entries